

Mathematics Assignment (Class-IX)

Chapter- 14 Statistics

	1 MARKER QUESTIONS							
1	Find the class size and class mark of the class 15-20.							
2	The width of each of five continuous classes in frequency distribution is 6 and the lower class-limit of the lowest class is 12. Find the upper class-limit of the highest class.							
3	Find the range and mode of the data : 7, 9, 7, 5, 9, 9, 18, 6, 8, 9.							
4	If the mode of 4, 9, 5, 4, 9, 5, 4, 9 and $x - 10$ is 9, then find the value of x .							
5	Find the mean of the first five prime numbers.							
6	Find the median of the given data : 144, 145, 147, 148, 149, 151, 152, 154, 155, 160.							
	2 MARKER QUESTIONS							
7	The mean of 20 numbers is 9. If 3 is added to every number what will be the new mean?							
8	The numbers 2,3,4,4,($x+3$), 5, 5, 6, 7 have been put in ascending order. If the median is 5, find x . Hence, find the mode of the above data.							
9	If 10, 13, 15, 18, ($x + 1$), ($x + 3$), 30, 32, 35, 41 are ten observations in an ascending order with median 24, find the value of x .							
10	The numbers of runs scored by a cricket player in 25 innings are as follows: 26, 35, 94, 48, 82, 105, 53, 0, 39, 42, 71, 0, 64, 15, 34, 67, 0, 42, 124, 84, 54, 48, 139, 64, 47. Find the mean.							
11	The final marks in Mathematics of 30 students are as follows: 53, 61, 48, 60, 78, 68, 55, 100, 67, 90, 75, 88, 77, 37, 84, 58, 60, 48, 62, 56, 44, 58, 52, 64, 98, 59, 70, 39, 50, 60. Arrange these marks in ascending order in groups 30 to 40; 40 to 50, etc. Then answer the following questions. If 40 is the pass mark how many failed?							
12	The mean of five numbers is 40. If one number is excluded, their mean becomes 38. Find the excluded number.							
	3 MARKER QUESTIONS							
13	The following table shows the number of students participating in various games in a school.							
	GAME		Cricket	Football	Basket ball	Tennis		
	No.of students		27	36	18	12		
	Draw a bar graph to represent the above data.							
14	The following is the distribution of weights (in kg) of 50 persons:							
	Weights (in kg)	55-60	60-65	65-70	70-75	75-80	80-85	85-90
	No.of persons	12	8	5	7	4	5	9

	Draw a histogram for the above data.																		
15	If the mean of the observations: $x, x + 3, x + 5, x + 7, x + 10$ is 9, find the mean of the last three Observation.																		
16	Find the missing frequencies in the following frequency distribution if it is known that the mean of the distribution is 50. The total frequency is 120. <table><tr><td>X</td><td>10</td><td>30</td><td>50</td><td>70</td><td>90</td></tr><tr><td>F</td><td>17</td><td>a</td><td>32</td><td>b</td><td>19</td></tr></table>	X	10	30	50	70	90	F	17	a	32	b	19						
X	10	30	50	70	90														
F	17	a	32	b	19														
17	The mean for the following data is 20.6. Find the value of p. <table><tr><td>x</td><td>10</td><td>15</td><td>20</td><td>25</td><td>35</td></tr><tr><td>f</td><td>3</td><td>10</td><td>p</td><td>7</td><td>5</td></tr></table>	x	10	15	20	25	35	f	3	10	p	7	5						
x	10	15	20	25	35														
f	3	10	p	7	5														
18	If mean of 10 observations is 20 and that of another 15 observations is 16, then find the mean of all 25 observations.																		
	4 MARKER QUESTIONS																		
19	Draw a histogram and hence a frequency polygon for the following frequency distribution. <table><tr><td>Marks</td><td>0–10</td><td>10–20</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td><td>70-80</td></tr><tr><td>No. of students</td><td>1</td><td>5</td><td>6</td><td>8</td><td>9</td><td>7</td><td>5</td><td>2</td></tr></table>	Marks	0–10	10–20	20-30	30-40	40-50	50-60	60-70	70-80	No. of students	1	5	6	8	9	7	5	2
Marks	0–10	10–20	20-30	30-40	40-50	50-60	60-70	70-80											
No. of students	1	5	6	8	9	7	5	2											
20	Draw a histogram and hence a frequency polygon for the following frequency distribution. <table><tr><td>Class Interval</td><td>1–10</td><td>11–20</td><td>21-30</td><td>31-40</td><td>41-50</td><td>51-60</td></tr><tr><td>Frequency</td><td>8</td><td>3</td><td>6</td><td>12</td><td>2</td><td>7</td></tr></table>	Class Interval	1–10	11–20	21-30	31-40	41-50	51-60	Frequency	8	3	6	12	2	7				
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Frequency	8	3	6	12	2	7													
	HOTS																		
21	If $\bar{x}$ is the mean of $x_1, x_2, \dots, x_n$ and $\bar{y}$ the mean of $y_1, y_2, \dots, y_n$. If z is the mean of $x_1, x_2, \dots, x_n, y_1, y_2, \dots, y_n$, then find z.																		
22	If $\bar{x}$ is the mean of $x_1, x_2, \dots, x_n$ then for $b \neq 0$, then find the mean of: $bx_1, bx_2, \dots, bx_n, \frac{x_1}{b}, \frac{x_2}{b}, \dots, \frac{x_n}{b}$.																		